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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

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FARM SCIENCE SNAPSHOTS Release: Saturday, Aug. 1, 1931.

Speaking Time: 10 Minutes

ANNOUNCEMENT: What's new in the business of farming and the sciences on which that business is based? We can't tell you everything, but we can and do offer you at this hour each week a few of the important items of farm business and science news gathered by the United States Department of Agriculture during the week.

---ooOoo---

It's encouraging to learn, first of all, that rainfall and cooler weather in July in some of the more seriously drought-affected counties in North Dakota and Montana have greatly relieved the problem of feed for livestock there. The drought has been so serious, however, that the drought loan regulations have been amended -- for those northwestern counties -- to enable borrowing to buy feed for livestock, and, in some instances, to allow feeding of crops which were security for drought loans made for seeding. As the pastures have improved with July rains, the requests for loans have fallen off.

In passing, it might be remarked that farmers are paying back their drought loans in all sections just as promptly as they can. The federal loan inspectors unanimously report that borrowers are living up to the spirit and the letter of their agreement to plant and cultivate carefully the crops which are the security for the loans.

For stockmen of the great central livestock feeding area probably the most important business news of the week has been the announcement by the Acting Secretary of Agriculture of the first decision in a series to be rendered on the reasonableness of stockyard and commission rates at the great livestock markets. Hearings have been in progress since December, 1929. The first decision to be announced applies to the yarding charges to producers marketing at St. Joseph, Mo. The Acting Secretary ordered that the St. Joseph Stockyards Company reduce the yarding charges made against producers; also that the company either make charges for yarding service to traders or dealers who heretofore had been rendered this service without charge, or else absorb itself the cost of this free service. It is estimated that this order will save shippers of livestock marketing at St. Joseph about $120,000 a year. Decisions are to follow in similar cases on stockyard rates at Denver, Col.; Kansas City, Mo.; and National Stock Yards, Ill. Furthermore commission rate decisions on cases heard at Sioux City, Ia.; Kansas City, Mo.; and St. Joseph, Mo., are yet to be handed down.

Here's a bit of business news for cotton growers in the extreme Southwest. The Federal authorities have modified the quarantine regulations on shipment of cotton lint from sections of Texas and New Mexico infested with the pink bollworm. The regulations used to require both pressing and fumigating of the cotton to make sure that all insects were killed before shipment. But the scientists have found that pressing alone surely kills the pests in lightly infested areas, so the fumigation regulations have been relaxed for those areas.

I think the biggest scientific news of the week comes from the Department of Agriculture chemists. A group of them has been working on the problem of finding the ideal insect poison. You want to know what an ideal insect poison would be, do you? Well, I'll tell you. It would be a poison that would be deadly to insects and harmless to humans and animals. It would do away with those tragic stories of mistaking the garden arsenic for flour. Also it would kill all sorts of insects, both sucking insects and biting insects. You know, at present we have to use "contact" poisons against sucking insects, and "stomach" poisons against biting insects.

Scientists have turned to Indian lore for the solution of the problem of the "ideal" insect poison. They have been examining fish poisons used by natives in various parts of the world. The theory is that if the poison kills a fish it will be likely to have the same power of destruction against insects. If the fish killed by poison may be eaten by humans, the poison probably is harmless to humans and to our warm-blooded vertebrate cousins of the animal kingdom.

One of the fish poisons gives promise of being the "ideal" insect poison. It is rotenone. It is found in the roots of several tropical plants, especially in cube (pronounced coo-bay) in South America, and Derris in the East Indes. Rotenone is harmless to warm-blooded animals when taken by mouth. One of the federal chemists proved that in a big way when he took a heavy dose himself and suffered no unpleasant effects. That means that apples, etc., sprayed with rotenone can't be discriminated against in foreign markets as are apples sprayed at present with arsenic preparations. Another advantage of rotenone is that it is both a "contact" and a "stomach" poison - to insects.

For three years our chemists have been studying this insect killer. The main idea has been to answer two questions -- Can the raw material be grown commercially and abundantly, either in the tropics of foreign countries, or in our own territory or possessions? and can the poison be made synthetically? There's no answer to the latter question yet, but some progress is being made. Sources of rotenone can be grown abundantly in the tropics of foreign countries. It is not yet known if the plants producing it will grow luxuriantly in our own tropical possessions, but they are being tried out.

The poison is getting out of the laboratory now, and into commercial production. At first, its principal use probably will be in household insect powders. As yet, rotenone costs more per pound in the concentrated powder form than other ordinary insect poisons. If the sources

of the raw materials further develop, it may be produced at fairly low cost.

A measure of practical farm science to save our basic agricultural resource -- the soil -- now is being aided by the local governments of at least two States, Oklahoma and Texas. I refer to the process of terracing farm lands to keep the soil at home. You know soil erosion causes a loss of at least 200 million dollars' worth of fertile top soil each year. In Texas and Oklahoma the lawmakers, realizing the menace of the soil thief, passed laws authorizing county officials to let landowners use county road machinery such as tractors and road graders to build erosion-stopping terraces on their farms. An expert of the Federal Land Bank at Houston, Tex., estimates that 2,000 feet of terrace can be built in an hour with heavy machinery of this sort. The cost is about $40 an hour.

We're getting off the completely serious track a bit with this item, but I can't resist quoting you the first paragraph of a recent radio address by the chief of the Federal Bureau of Animal Industry. It indicates that he might have turned his hand to professional radio writing or other forms of literary endeavor if he hadn't become such an eminent scientist. Listen:

"When I am asked to talk about meat, my first inclination is to recount the virtues of some of the steaks I have known -- big steaks over an inch thick with ample fat mixed through the lean. I like them cooked a deep crusty brown with butter melting down into the gridiron searings where the broiler rack has made its mark. I like a steak cooked enough so that when the outside is nicely brown there is still a trace of red as the knife cuts through to show a lingering rareness."

There, ladies and gentlemen, speaks a master of English -- and of gastronomy -- as well as one of the world's eminent animal scientists.

Speaking of animal science, we are getting practical proof of the soundness of the advice first given eight years or so ago by the Federal animal parasite fighters to practice rigid sanitation at and after farrowing time. Last Spring, for the first time in nine years, more than six pigs per litter were saved, as an average, so owners of swine reported. Undoubtedly the spread of the swine sanitation system has contributed to the steady rise of the average, although the mild weather of this past Spring may have helped bring about the big jump.

Now you want to know about the new Federal bulletins of the week that give you detailed scientific information on farming and home-making. All right, here we go:

For Mother, 3 bulletins -- Leaflet No. 76-L, "Slip Covers"; Leaflet No. 80-L, "Dresses for Little Girls"; and Farmers' Bulletin 1471-F, "Canning Fruits and Vegetables at Home."

For Father, or whoever it is in the family that looks after the lawn and shade trees, 1 bulletin -- Farmers' Bulletin 1169-F, "Insects Injurious to Deciduous Shade Trees and Their Control."

For Eastern dairymen -- Circular 166-C, "Suggestions for the Improvement of Old Bank Dairy Barns."

For the farm business man -- "Farmers' Bulletin 1139-F, "A Method of Analyzing the Farm Business." Also, Farmers' Bulletin 1377-F "Marketing Poultry."

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ANNOUNCEMENT: To get any of those bulletins that will be helpful to your farm or home activities, send your request either to the United States Department of Agriculture, Washington, D. C., or to the cooperator with the Department in presenting these programs, Station _____.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

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FARM SCIENCE SNAPSHOTS Release, Saturday, August 8, 1931.

NOT FOR PUBLICATION

ANNOUNCEMENT: News of the business situation of agriculture and related industries, and of the scientific findings affecting those businesses comes daily in great volume from the governmental units charged with promoting the welfare of those businesses. With the aid of the Radio Service, United States Department of Agriculture, we gather up for you each week some of the significant bits of news and present them in these FARM SCIENCE SNAPSHOTS.

We'll look first today at some of the items of business news for agriculture during the past week.

The Federal Department of Agriculture has issued a review of the sheep and wool situation which is timely at this season as sheep owners are making plans for next year. The first thing to observe is that there is likely to be considerable reduction in numbers of sheep during the next two or three years. We had a record crop of lambs this spring. But range is poor in the west. This probably will lead western sheepmen to market more than the usual proportion of the lamb crop and hold back fewer ewe lambs for breeding. Also it probably will cause more than the usual proportion of unfinished lambs to come to market from the west.

But the Corn Belt States may take more feeder lambs, because of the better prospects for feed production in those States. If they do, we shall see large supplies of fed lambs in the early winter. On the other hand, the supplies of fed lambs in the late winter and spring markets from Colorado and western Nebraska may be smaller, because of decreased feed production there.

In the native sheep states where sheep are part of a general farm business, low prices of other farm products don't give much incentive to shift from sheep. Some farmers there may take advantage of the low prices for breeding ewes to buy small flocks.

As for wool production, it continues large. This year's world clip may come up to the record one of 1928. The United States clip is 7 per cent bigger than last year's. In this country wool textile manufacturing has picked up. In other important wool manufacturing countries no significant improvement has developed.

Here is some more business news for stockmen. Last week, you remember, we told you of the order from the Acting Secretary of Agriculture directing lower yarding charges at the St. Joseph livestock yards. In the past week, the Acting Secretary has issued two more orders dealing with charges at midwestern and western markets. One reduces commission rates at Sioux City, Iowa, and, it is estimated, will save producers selling on that market some $125,000 a year. The second order cuts yardage rates at Denver, and is estimated to effect a saving to producers marketing there of $100,000.

For stockmen of the drought stricken areas in northwestern North Dakota and northeastern Montana, the time of taking applications for federal relief loans for livestock feed has been extended to August 15. The original closing date was August 1.

Next some business news for cotton growers. Two weeks ago, you remember, the Secretary of Agriculture called attention to the fact that our cotton has been slipping in quality. This week the Department scientists experimenting with ginning methods announced discoveries that may help raise the quality of our cotton. They find that cotton ginned when it contains too much moisture loses quality. Also, that too rapid operation of the gin also will injure the fiber. Gin operators naturally are following closely the findings of these scientists.

We have referred frequently to the efforts of scientists to improve the business situation of farming by finding new uses for present waste materials produced along with our crops. We have told you about the plans for experimenting with crop wastes in a new factory-scale laboratory project at the Iowa State College, Ames, Iowa. Now comes the news that Mr. Paul Burke Jacobs, chemical engineer of the Bureau of Chemistry and Soils, has been appointed to direct this work. It will start this month.

One of the main lines of work to be pushed will be the development of a process of making illuminating and fuel gas out of a combination with packing house, cannery, and creamery wastes of such farm wastes as cornstalks and oat hulls. The scientists expect to generate the gas from these substances with the aid of bacteria. After turning out the gas, they still will have left the valuable fibrous portion of the corn stalks and oat hulls. This fibrous material will be used in the manufacture of paper, wall board, and insulating board. The process was developed by Dr. A. M. Buswell of the University of Illinois, who will cooperate with scientists of the Federal Government and Iowa State College in developing its practical and commercial possibilities.

Another way of cutting down wastes is control of the pests which handicap livestock. The Bureau of Animal Industry is starting in the far Western States a campaign to reduce losses among sheep caused by the liver fluke parasite. These tiny destroyers of animal health are spread by snails living

near watering places. To destroy the flukes, destroy the snails. This will be the plan of campaign.

Soil scientists have more news for us this week concerning the effects of erosion. One item comes from New Mexico. On a 100-mile-square area there above Elephant Butte reservoir, one flood of the Rio Grande River in 1929 deposited 88 and one-half million tons of sand, silt, and clay eroded from the Puerco River Basin where overgrazing had made the soil subject to much more rapid erosion than ordinarily takes place. In some places that one flood laid down a deposit of debris 7 feet deep.

The soil scientists also observe that when the color of your soil begins to change from dark to light -- look out. They say that in central Texas, for instance, the rolling black lands in many places have faded to gray, yellow, and even almost white, as if something had drawn the life blood. Erosion has done just that. Every time there is a rain on these rolling lands, some of the rich topsoil runs off with the water -- unless terracing protects the slopes against sheet erosion. A single rain removed twenty-three tons of topsoil from each acre of 3 million acres, the experts estimate.

Now we turn to some of the news of conservation of the wild life of our forests and streams and fields. The Forest Service is surveying the game-carrying capacity of the national forests and the fish-carrying capacity of the streams within the forests. The aim is to work out a program for these forests that will bring about a continuous yield of fish and game with replenishment each season like the repetition of crops of the field.

It's clear that in order to keep up our "crop" of fish and game we have to save "seed" animals and birds and fish over each season. That fundamental truth is likely to cause rigid limitation of the number of waterfowl to be killed this coming season. So say the officers of the Bureau of Biological Survey. The "crop" this year seems likely to be small because of the long-continued drought in waterfowl nesting areas of the United States and Canada. Already Federal regulations governing the shooting of ducks and geese have been amended to reduce by two weeks the open season throughout the United States this fall and winter. Further restriction may be necessary. Surely the sportsmen of the United States will abide by restrictive regulations. It is only good sense to do so. Failure to observe the closed season and the bag limits will threaten a disaster to the wildfowl of the continent and lessen the shooting in future years.

Now, to conclude, our review of new amd revised publications for farmers and homemakers, available this week from the United States Departmemt of Agriculture:

(NOTE TO ANNOUNCER: Select only bulletins of use in your region.)

For Farmers everywhere -- "Weeds, How to Control Them," Farmers' Bulletin 660-F; "Farm Budgeting, "Farmers' Bulletin 1564-F; "Farm Slaughtering and Use of Lamb and Mutton, "Farmers" Bulletin 1172-F; "Feeding Cattle for Beef, "Farmers' Bulletin 1549-F; "Dehorning, Branding and Marking Beef Cattle, "Farmers' Bulletin 1600-f; "Beautifying the Farmstead," Farmers' Bulletin 1087-F.

For shade tree owners east of the 100th meridian, and south of the lower Lakes region -- "The Bagworm, an Injurious Shade-Tree Insect, "Farmers' Bulletin 701-F.

For landowners in the Lake Region and in upper New York State and New England -- "Moss Peat, Its Uses and Distribution in the United States," Circular 167-C.

For landowners in the South Atlantic and East Gulf coastal sections - "Slash Pine, "Farmers' Bulletin 1256-F.

For Homemakers everywhere - "Making Fermented Pickles, "Farmers' Bulletin 1438-F.

For gardeners everywhere -- "Onion Culture," Farmers' Bulletin 354-F; "Home Production of Onion Seeds and Sets," Farmers' Bulletin 434-F.

For truckers and gardeners east of the Mississippi - "Lettuce Growing," Farmers' Bulletin 1609-F.

For Florida growers - "Spraying for the Control of Insects and Mites Attacking Citrus Trees in Florida," Farmers' Bulletin 933-F; and "Pineapple Culture in Florida," Farmers' Bulletin 1237-F.

ANNOUNCEMENT: To secure copies of the bulletins just announced which may be useful in your farm or home business library, send your request either to the United States Department of Agriculture, Washington, D. C., or to Station _____ which cooperates with the Department in presenting the weekly program of Farm Science Snapshots.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

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★ AUG 19 1931 ★
U. S. Department of Agriculture

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FARM SCIENCE SNAPSHOTS Saturday, August 15, 1931

ANNOUNCEMENT: We take stock now of the major items of farm business and science news coming from the Federal Department of Agriculture during the week now closing.

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The Federal Bureau of Agricultural Economics has summed up the insurance situation of farmers in some comments that give one to realize that protection against losses to the nation's basic industry still is sadly lacking in some respects. Here is the situation in outline:

In the East, Middle West, and Far West, fire insurance on farm buildings and other property is the general rule and windstorm insurance is fairly common. But in the Cotton States, even fire insurance is more often the exception than the rule.

About half of the farm motorists now carry some kind of insurance on their cars. But automobile insurance is pretty largely confined to fire and theft loss protection. Not so many farmers carry liability insurance.

Less than half of the American farmers carry any life insurance. Those who do carry it, carry less than the average urban family.

Now we come to the peculiar forms of insurance for the farm business, and we find protection here almost totally lacking. Livestock insurance to meet loss from disease and accident now covers only a fraction of one per cent of the Nation's livestock. All the activity in this form of insurance is at present limited to a single capital-stock company of a modest size, and to a score of relatively local mutual companies, nearly half of which are in southeastern Pennsylvania.

More pressing than the need for livestock insurance is the need for some form of insurance against heavy damage to growing crops. The farmers of the United States spend annually some 25 million dollars for hail insurance. But hail is only one of many crop hazards. Of course the problem is difficult. It's possible that an insurance company essaying this type of protection would be sunk in its first year by heavy losses over big areas. This year and last year, for instance, offer fresh evidence of the problem in the hazards of drought and insects.

However, Dr. V. N. Valgren, the economist who made the compilation of insurance conditions among farmers believes that the problems of general crop insurance are not insuperable.

Two news items come from foreign country, indicating a decrease in the world's total supply of agricultural products for this year. Floods in China have damaged huge rice and cotton areas. Dry, hot weather in Russia has reduced grain crop prospects in the land of the Bear That Walks Like a Man. Still, we shall not lack for crop production in this old world this year.

A few straws pointing the way the farm business winds are blowing follow: Farmers of the South used only about three-fifths as much commercial fertilizer on cotton this year as last year...in New Jersey, farmers own their auction markets for the sale of various sorts of farm produce; they report that their profits are increased by selling on their own markets.....the Mississippi State Agricultural Service has not yet made up its mind as to whether or not the motor truck is a blessing to farmers; it tends to believe, however, the producers of perishables are hurt by the fierce competition on local markets made possible by the motor truck under the itinerant peddler of fruits and vegetables.

---ooOoo---

Once again this year our attention is attracted to our insect enemies as one of the perpetual hazards of farming. We have just received a summary of the most harmful insect outbreaks of July in the U. S.

The paramount feature of the July insect record is the devastating outbreak of grasshoppers in the Great Plains. It's said to be the most serious grasshopper invasion since the early settlers were demoralized by visitations of the Rocky Mountain locust in the decade between 1868 and 1880. Last month, besides the Great Plains plague, serious grasshopper outbreaks were reported from New York westward to Idaho, Nevada, and Arizona, and southward to Arkansas, Oklahoma, and Texas.

Naturally, in view of these conditions, it's not surprising the stock on hand of Farmers' Bulletin 747-F, "Grasshopper Control" has been exhausted. But a reprint is being rushed through the Government Printing Office. Better send for your copy now, if you live in grasshopper territory.

Grasshopper visitations are sporadic. But every year, in some part of the country, we have a cutworm outbreak among cereal crops, especially corn. This year the cutworms have been especially bad. In June a severe outbreak was reported from the West-Central States. Last month there was another in the North Central States. Also, late sweet corn on over 1,000 acres of land in San Diego and Los Angeles Counties, California was practically ruined by an undetermined climbing cutworm. One preventive for cutworm attacks is early fall plowing of grasslands to be sown to corn next spring. Other measures to take when an outbreak occurs are listed in Farmers' Bulletin 739-F, "Cutworms and Their Control in Corn and Other Cereal Crops."

In the deep South there is always present the menace of the fall army worm. Of course, this insect also marches in the North— in fact in all parts of our Farm and Home neighborhood except the northern New England, New York, Dakota, Minnesota, and Wisconsin regions, the fall army worm is a potential crop destroyer. Well, this year's outbreak in the

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South came two months later than usual, occurring last month. The outbreak was in the Everglades of Florida and the Mississippi Delta of Louisiana. This is one pest against which you just have to be forked lightning if you stave off its invasion. You've got to apply controls in 24 hours after it appears. The methods are decribed in Farmers' Bulletin 752-F, "The Fall Army Worm or 'Grass Worm' and Its Control."

Our old mid-western cereal crop enemy, the chinch bug has come back in force this year. The reports from the corn belt say: "Chinch bug seriously damaged corn in southern Illinois, central Missouri, and southern and central Kansas. It also did some damage to this crop in northern Ohio. This insect seems to be building up an abnormal population north of the normal chinch bug belt in South Dakota and Iowa. "The Chinch Bug and How to Fight It" is Farmers' Bulletin 1498-F. Got that number, Corn Belt folks? 1498-F.

Also midwestern corn growers in the western part of the belt have been hard-bit by another perennial enemy--the corn earworm. The State entomologists report this pest more numerous during July in the North-central States than it has been for several years. In Nebraska it is doing more damage during this July than in any July of the past 30 years. Which makes verytimely indeed for the Corn Belt folks, the publication three months ago of the Farmers' Bulletin entitled "The Corn Earworm as an Enemy of Corn in the Easter States." Its number is 1651-F. Its directions apply east of the Rockies.

Well, here we've spent most of our time on noting the outbreaks of cereal crop pests. I do want to let you know, however, of the bulletins giving directions for fighting a number of the insects of fruits and vegetables most damaging in recent weeks.

The grape leaf hopper is active from New Jersey westward to Ohio. Get "Insect and Fungous Enemies of the Grape," Farmers' Bulletin 1220-F.

Blister beetles, as usual, are now attracting a lot of attention on a variety of crops in the east-central and west-central States. Squash bugs are reported much more often than last year from the Middle Atlantic states southward to Georgia, Alabama, and Mississippi. They're also reported doing serious damage in Iowa and Utah. In idaho they're generally destructive over the southwestern part of the State. Directions for control of both blister beetles and squash bugs are given in that old stand-by bulletin W.R. Beattie mentions so often, Farmers' Bulletin 1371-F, "Diseases and Insect Pests of the Flower Garden."

The Mexican bean beetle has gotinto Rhode Island. Larvae were found during July in Washington County of that State. The first generation of the bean beetle did considerable damage in Connecticut. It was reported for the first time from Esopus and Fort Ewen, N. Y. An encouraging note is that in the older infested region in the Middle Atlantic States, comparatively little damage is being done by the Mexican bean beetle. But Eastern and Southeastern gardeners and truckers would do well to have in their libraries a copy of Farmers' Bulletin 1624-F, "The Mexican Bean Beetle in the East and Its Control."

Severe infestations of that destructive apple insect, the codling moth were reported throughout the East in July. Band counts in western Illinois indicate that the codling moth population is about 10 times as great as at the same time last year, and in eastern Illinois 25 times as great. I suppose every apple grower knows the standard controls for codling moth. But they're given in Farmers' Bulletin 1270-F. Also this bulletin, "The More Important Apple Insects," tells how to control many another pest of the orchard.

CLOSING ANNOUNCEMENT:

That concludes our Farm Science Snapshots prepared for us by the United States Department of Agriculture, and broadcast by Station_____ Send your requests for publications mentioned in these broadcasts either to the United States Department of Agriculture, Washington, D. C., or to Station _____.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
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FARM SCIENCE SNAPSHOTS. Saturday, August 22,1931.

NOT FOR PUBLICATION.

Speaking Time: 10 Minutes.

OPENING ANNOUNCEMENT: At this time each week Station_____cooperating with the United States Department of Agriculture broadcasts a weekly summary of developments in farm business and science. Today's opening item deals with the business end of cotton farming.

Jute, an imported product, takes the place of 3,000,000 bales of cotton right here in our own country every year, says Commissioner Talmadge of the Georgia Department of Agriculture. Roughly speaking that's one-fifth of our annual cotton crop of approximately 15,000,000 bales. The Commissioner states that we could easily use 280,000 bales of our own cotton every year just to replace the jute bagging used in wrapping cotton bales. Jute bagging is approximately 9 pounds per bale lighter than cotton bagging, but many cotton mills have expressed a willingness to give an additional price for cotton wrapped in cotton bagging. Commissioner Talmadge urges cotton ginners throughout the Cotton Belt to order cotton bagging this fall.

Here's another bit of news that deals with the business end of the cotton crop. It comes from L. N. Duncan, Director of the Alabama Agricultural Extension Service, who urges, FEED MORE COTTONSEED MEAL TO WORK ANIMALS ON THE FARM. He makes that statement after a study of experiments in feeding cottonseed meal to dairy cattle, beef cattle, work animals, hogs, and sheep. Mr. Duncan believes that cottonseed meal should form a part of the ration of these farm animals, especially in the cotton growing States where the meal is produced and where it is necessary to import livestock feed from other States.

Now we pass from the business end of agriculture to conservation. In that connection we note that the States and Territories of this country distributed more than 79,000,000 trees last year for forest planting. These plantings when properly managed not only grow into profitable trees, but such trees help prevent our soils from washing. New York alone planted more than 24,000,000 trees last year and Michigan was second with a planting of more than 19,000,000 trees, Massachusetts third, Ohio fourth, and Wisconsin fifth. All told, 39 States, Hawaii, and Porto Rico reported the planting of trees last year.

The planting of slash pine and the protection of growing stands are recommended by the Forest Service of the Department of Agriculture as measures to insure a steady income from many non-agricultural lands along the southeast coast from South Carolina to Louisiana. The slash pine is a quick grower, produces valuable timber, and the heaviest crop of naval stores. It is one of the easiest trees to propagate naturally, grows well on wet lands, and has a tendency to spread widely on cut-over lands and old fields.

Now let's run over some of the recent accomplishments of scientists in the Federal Department of Agriculture. Here's one for poultrymen.

A new, cheaper, less complicated, and more convenient test for pullorum disease of poultry promises to give the industry a more effective means for reducing one of its most serious losses. This test was developed by a group of scientists of the Bureau of Animal Industry. The new test is so simple that all that is necessary is to catch a chicken, make a pin prick, get a small drop of blood, mix it with a drop of diagnostic agent on a pane of glass--and the test is made inside a minute. Material for making more than 100,000 tests has been distributed to investigators and field workers throughout the United States as a means of checking the reliability of the test under a wide range of field conditions.

Every progressive farmer knows the value of purebred sires, and the many purebred sire campaigns fostered by various organizations throughout the country have resulted not only in the use of more purebred sires, but in the wider use of purebred female animals as well. For every purebred sire, except among poultry, there are now 6 purebred females, 2 crossbred females, 9 grade females, and less than one-half of one per cent scrub females. As for poultry, there are 14 purebred hens to each purebred male.

There is no cure for mosquito bites. The best remedy is PREVENTION, says the Department of Agriculture. Screens, 16 meshes to the inch, offers some protection but it is better to destroy or spray oil on breeding places.

Now let's see what the Department of Agriculture has to offer in the way of service this week. One item is a new motion picture film entitled "TIMBER." This picture will be of special interest to timber cutters everywhere but especially to those in the pine regions of the Pacific Northwest. This, and the other 250 subjects in the department's film library, may be borrowed free, except for transportation to and from the Capital City.

Nitrogenous fertilizers have proved most efficient in the production of sugarcane in the Louisiana "sugar bowl" says a new bulletin called "SOIL

FERTILITY INVESTIGATIONS IN THE SUGARCANE DISTRICT OF LOUISIANA." This bulletin is the result of cooperative work between the Louisiana Agricultural Experiment Station and the United States Bureau of Chemistry and Soils. Copies of this bulletin may be had by addressing the Louisiana Agricultural Experiment Station at Baton Rouge, Louisiana.

If a termite treatment salesman calls at your house and tells you that the house is being eaten up by termites, and offers to sell you a knock-out poison remedy----bid him good day, address a postal card to the United States Bureau of Entomology, Washington, D.C., and ask them to send you dependable literature on that subject. Don't buy the remedy.

Now let's close today's program by running over the list of Department of Agriculture publications that have rolled from the big government presses this week. Make a note of those you want.

Circular No.169-C says that thorough field spraying or dusting with fungicides offers the best and practically the only protection for tomato growers who suffer losses from tomato late-blight rot.

Housewives who like to see their dining tables ornamented with mint jelly and roast lamb will doubtless want a copy of Leaflet No. 74-L, entitled "BONING LAMB CUTS."

Poultry raisers everywhere will find useful information in the three following bulletins;

MARKETING POULTRY-------Farmers' Bulletin No.1377-F. By the way this bulletin has just been revised and that means the information is right up to date.

FARM POULTRY RAISING-------Farmers' Bulletin No.1524-F. This is also a newly revised bulletin, and has a place in your poultry library.

THE GUINEA FOWL--------Farmers' Bulletin No.1391-F. Revised in January 1931 and full of practical information about the fowl with the famous "pot-rack."

If you live east of the Mississippi River, and leave your automobile parked under shade trees at night----better write for a copy of Farmers' Bulletin No.1571-F, entitled "THE EUROPEAN STARLING IN THE UNITED STATES."

Every progressive person from the Golden Gate in California to the Statue of Liberty in New York Bay will want to read a copy of Farmers' Bulletin No. 1638-F, called "RAT PROOFING BUILDINGS AND PREMISES."

"CROTALARIA, A NEW LEGUME FOR THE SOUTH," is the title of Circular No.137-C.

"THE AVOCADO, ITS INSECT ENEMIES AND HOW TO COMBAT THEM," is the title of Farmers' Bulletin No.1261-F.

If you desire information on agriculture in the Virgin Islands, ask for the 1930 REPORT OF THE VIRGIN ISLANDS AGRICULTURAL EXPERIMENT STATION.

CLOSING ANNOUNCEMENT: If you want any of the new or revised publications mentioned in todays Farm Science Snapshot program, write either this station or the United States Department of Agriculture in Washington, D.C., and remember that Station_____broadcasts one of these programs every Saturday at this time.

UNITED STATES DEPARTMENT OF AGRICULTURE

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FARM SCIENCE SNAPSHOTS. Saturday, August 29, 1931.

NOT FOR PUBLICATION.

Speaking Time: 10 Minutes. All Regions.

OPENING ANNOUNCEMENT: Ladies and gentlemen, the next 10 minutes will be devoted to a summary of weekly developments in the field of farm business and science. This program is presented by Station _____ __ in cooperation with the Federal Department of Agriculture. Today's opening item deals with the business end of farming.

---ooOoo---

The Secretary of Agriculture recently announced an amendment to the European corn borer quarantine so that corn and other restricted articles from infested sections may be shipped through uninfested sections to other infested sections on a through bill of lading. This new regulation became effective August 15, 1931.

In that connection I want to call your attention to the new regulation affecting the control of Japanese beetle. Heretofore the Japanese beetle regulations have provided October first as the earliest date that shipping stock could be removed from treated soil. Under the new order the owner will be allowed to begin lifting plants on September 20, provided the plot in which the plants were grown has been treated two or more successive seasons.

Here's an item of interest to wheat farmers. The Bureau of Agricultural Economics reports a carry-over of 319,059,000 bushels of domestic wheat in the United States on July 1, 1931. This compares with 290,530,000 on July 1, 1930 and is an increase over last year of 28,529,000 bushels or really 10 per cent.

In that connection we note that wheat prospects for Russia as a whole point to a crop considerably smaller than last year despite the 7 per cent increase in acreage. But, notwithstanding the less favorable crop outlook, considerable exports of wheat are to be expected from some sections of Russia early in the season.

Municipally-owned farmers' markets are proving profitable in many sections of the country. From Detroit, Michigan comes the following report; "In spite of one of the most severe and protracted droughts in local history, the municipally-owned farmers' markets of Detroit enjoyed the greatest activity during 1930 of any year since their establishment in 1891." The total number of truck loads of produce sold on these markets in 1930 exceeded the 1929 total by 19 per cent and the previous high record of 1927 by 12 per cent. In addition to selling the farmers' produce to a good advantage these Detroit markets were able to make studies of a number of practical problems pertaining to the marketing of produce.

Now we drop the business end of farming to take up newly reported scientific investigations. The first is from California. The United States Department of Agriculture has found a lemon tree in Burbank, California that produces pink lemons. The pink lemons first exhibited at the National Orange Show this year. Department specialists declare the pink lemon is another illustration of the occurrence of striking bud variations in this variety of citrus fruit. Scientific workers have inserted budwood from the pink lemon tree into sour orange seedlings and the resulting trees will be studied to find out if the pink lemon can be further propagated.

Scientists of the Department of Agriculture tell us that it's possible for farmers to minimize frost danger to their growing corn by raising it in fields that have been fertilized or are naturally rich in plant food. Corn that has received an abundance of plant food is better able to withstand frost attacks, both in the late spring and early fall, than corn grown on thin land. Corn produced on rich soil matures more completely than corn produced on poor soil.

Scientific investigators in scouting airplanes have found spores of certain plant diseases 10,000 feet high. Maybe that accounts for the spread of such diseases as black stem rust of small grain. Investigators working with white pine blister rust have found that it requires 55 hours for these spores to fall a distance of one mile through the air. Such experiments make it clear that plant disease spores may be blown for long distances unless brought down by rain or some other agency.

Most of you have doubtless heard a great deal about watering stock and perhaps feeding coal to hogs to increase their weight, but I wonder if you have heard about this form of watering chickens. A Federal Inspector visited a wholesale poultry house and found that dressed chickens were being given hypodermic injections of water from a hose terminating in a hollow needle. Each bird received several ounces of water, which was gradually absorbed. This method of "doctoring" not only increased the weight of the dressed birds, but it made the scrawny ones look nice and fat. However,

State officials seized the profit-making hose, fined the dealer, stopped the swindle. They said that it was the wrong way and the wrong time to water chickens.

Now we turn from scientific news to the service Uncle Sam has to offer this week. If you have a bulge in a granary wall, a sag in a roof, or if you want to know how to straighten out a leaning barn, ask for a copy of Leaflet No. 77-L, entitled "BRACING FARM BUILDINGS."

The Department of Agriculture has developed and sent out during the last few years two splendid varieties of tomatoes. One is called MARGLOBE and the other goes by the name BREAK O' DAY. These tomatoes have won the approval of thousands of growers in many parts of the country. For further information about these tomatoes ask for a copy of Farmers' Bulletin No. 1338-F, entitled "TOMATOES AS A TRUCK CROP."

If you want the latest information on terracing ask for a copy of the brand new Farmers' Bulletin No. 1669-F, called FARM TERRACING.

If you are planning on shipping livestock this fall and winter, ask for a new copy of Leaflet No.38-L, entitled MAINTAINING THE HEALTH OF LIVESTOCK IN TRANSIT.

If you're going to do any dehorning this fall, you'll want a copy of Farmers' Bulletin No.1600-F, called DEHORNING, BRANDING AND MARKING BEEF CATTLE.

CLOSING ANNOUNCEMENT: That, ladies and gentlemen, concludes the Farm Science Snapshots prepared for Station _____by the United States Department of Agriculture. For free copies of the publications mentioned in today's program send your request to Station _____ in____ _____ or write directly to the United States Department of Agriculture in Washington, D.C. _____ will broadcast another one of these programs next Saturday at this same time. You are invited to tune in.